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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,918	05/22/2001	Yoshihiko Ikemoto	SHM-01801	8734

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PATENT GROUP
CHOATE, HALL & STEWART
EXCHANGE PLACE, 53 STATE STREET
BOSTON, MA 02109

EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT	PAPER NUMBER
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2675

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DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/862,918

Applicant(s)

IKEMOTO, YOSHIHIKO

Examiner

Srilakshmi K. Kumar

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

The following office action is in response to Amendment A, filed June 25, 2003.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickson et al (US 5,191,416) in view of Hanko et al. (US 6,493,041).

As to independent claim 1, Dickson et al disclose video display apparatus displaying an image having a first frame frequency at a second frame frequency that is lower than said first frame frequency (col. 1, lines 65-col. 2, line 8), said video display apparatus comprising:

a synchronization signal generation circuit for generating a synchronization signal of said second frame frequency; Dickson et al do not disclose a signal generation circuit for generating a synchronization signal of said second frame frequency. Dickson et al do disclose in col. 1, lines 40-45, where the system uses readily available video processing equipment. Hanko et al disclose in Fig. 1, item 130, and in col. 8, lines 22-29, a digitizer/decoder, which is also a signal generator. It would have been obvious to one of ordinary skill in the art that the video processing equipment of Dickson et al could have easily been the signal generator of Hanko et al. The signal generator is advantageous as it indicates times at which pixels, rows of pixels and arrays of pixels are available.

a conversion frequency detector for calculating a number of frames making up an unit block at each of said frame frequencies and a number of frames to be thinned based on said first frame frequency and said second frame frequency (col. 5, lines 40-54);

a frame memory for storing a first frame having said first frame frequency; Dickson et al do not disclose a frame memory for storing. Hanko et al disclose a frame memory in Fig. 1, item 140. It would have been obvious to one of ordinary skill in the art that Dickson et al would have memory for storing as the system would need to store the pixel values for comparison between different frames.

Dickson et al do not disclose, a difference detector for comparing intensity data of each dot on said video display apparatus of a second frame which is currently input to said video display apparatus with intensity data of each dot of said first frame which is stored in said frame memory and which is immediately before said second frame, and detecting a difference between said two frames; Hanko et al disclose a difference detector (Fig. 2, item 15) for comparing intensity data of each dot on said video display apparatus of a second frame which is currently input to said video display apparatus with intensity data of each dot of said first frame which is stored in said frame memory and which is immediately before said second frame, and detecting a difference between said two frames as is disclosed in col. 9, lines 31-62. It would have been obvious to one of ordinary skill in the art that the detector of Hanko et al could have easily been incorporated into that of Dickson et al as the detector aids in disclosing or calculating movement.

Dickson et al do not disclose, a difference adder for counting a number of dots for a case in which said difference of said intensity data detected by said difference detector is greater than a prescribed value; Hanko et al disclose a difference adder in col. 9, lines 63-col. 10, line 7. It

Art Unit: 2675

would have been obvious to one of ordinary skill in the art that the adder of Hanks et al could have been easily incorporated into that of Dickson et al as the adder aids in disclosing or calculating movement.

a movement detection/judgment section for distinguishing whether or not a count value detected by said difference adder is below a prescribed value and outputting a signal indicating that thinning of said second frame is possible, when said count value of said difference adder is below said prescribed value (col. 5, lines 64-col. 20, lines 28); and

a frame thinning section for thinning said second frame, in a case in which said signal indicating that frame thinning of said second frame is possible is output from said movement detection/judgment section and also a signal indicating that said number of frames to be thinned is output from said conversion frequency detector (col. 5, lines 64-col. 20, lines 28).

As to independent claims 6 -8, limitations of claim 1, and further comprising, a frame thinning means for executing frame thinning of said second frame (Fig. 2); and a frame thinning stopping means for stopping the frame thinning operation of said frame thinning means within a current block including said first frame and said second frame (Fig. 2, col. 5, line 31-col. 6, line 28), in a case in which, if, as a result of an execution of frame thinning by said frame thinning means, a total number of thinned frames has reached said number of frames to be thinned which is output from said conversion frequency detector; comparing said intensity data of said first frame with that of said second frame; thinning said second frame when said intensity data of said two frames are the same (Fig. 2, col. 5, line 31-col. 6, line 28).

As to dependent claim 2, see limitations of claim 6, above.

Art Unit: 2675

As to dependent claim 3, limitations of claim 1, and further comprising, wherein an area detector for detecting movement of an image within a prescribed area on said video display apparatus is provided, and detection results of said area detector being output to said movement detection/judgment section (col. 2, lines 13-18).

As to dependent claim 4, limitations of claim 1, and further comprising, wherein said video display apparatus is a plasma display apparatus. Although Dickson et al and Hanko et al do not disclose where the display apparatus is one of a plasma display apparatus, it would have been obvious to one of ordinary skill in the art as the systems of Dickson et al and Hanko et al disclose video signal processing which could have been used in any type of display.

As to dependent claim 5, limitations of claim 1, and further comprising, wherein said video display apparatus is a liquid-crystal display apparatus. Although Dickson et al and Hanko et al do not disclose where the display apparatus is one of a liquid crystal display apparatus, it would have been obvious to one of ordinary skill in the art as the systems of Dickson et al and Hanko et al disclose video signal processing which could have been used in any type of display.

Response to Arguments

3. Applicant's arguments filed June 25, 2003 have been fully considered but they are not persuasive.

Dickson et al disclose video display apparatus displaying an image having a first frame frequency at a second frame frequency that is lower than said first frame frequency (col. 1, lines 65-col. 2, line 8) and a conversion frequency detector for calculating a number of frames making up an unit block at each of said frame frequencies and a number of frames to be thinned based on said first frame frequency and said second frame frequency (col. 5, lines 40-54).

Dickson et al disclose frame thinning in col. 6, lines 15-27 wherein the image data undergoes processing to reduce the frames to 24 frames per second and also to reduce the undesired effects of temporal aliasing. Therefore, it is clearly shown that Dickson et al performs frame thinning.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Srilakshmi K. Kumar** whose telephone number is **(703) 306 5575**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Art Unit: 2675

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703 305 47000377.

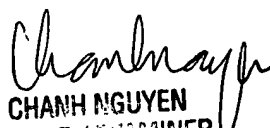
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 703 306 5575. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J. Saras can be reached on 703 305 9720. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9314 for regular communications and 703 308 9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 4700.

Srilakshmi K. Kumar
Examiner
Art Unit 2675

SKK
September 8, 2003


CHANH NGUYEN
PRIMARY EXAMINER